

> S 186691-13-4/RN  
L1 1 186691-13-4/RN

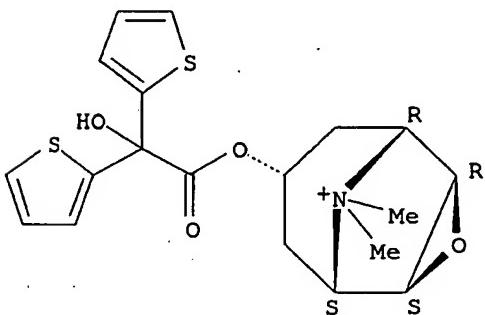
=> DIS L1 1 FIDE

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
RN 186691-13-4 REGISTRY  
CN 3-Oxa-9-azoniatricyclo[3.3.1.0<sub>2,4</sub>]nonane, 7-[(hydroxydi-2-thienylacetyl)oxy]-9,9-dimethyl-, (1.alpha.,2.beta.,4.beta.,5.alpha.,7.bet.a.)- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Tiotropium  
FS STEREOSEARCH  
MF C19 H22 N O4 S2  
CI COM  
SR CA  
LC STN Files: ADISINSIGHT, BIOSIS, CA, CAPLUS, SYNTHLINE, TOXCENTER,  
USPATFULL

Ring System Data

Elemental Analysis	Elemental Sequence	Size of the Rings	Ring Formula	Identifier	Occurrence
EA	ES	SZ	RF	RID	Count
C4S	SC4	5	C4S	16.145.3	2
C20-C4N-C5N OC2-NC4-NC5 3-5-6	OC7NO		347.7.1		1

Relative stereochemistry.



31 REFERENCES IN FILE CA (1967 TO DATE)  
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
31 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> file caplus  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

SINCE FILE ENTRY TOTAL  
SESSION  
2.68 2.89

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FILE COVERS 1907 - 14 Aug 2002 VOL 137 ISS 7  
FILE LAST UPDATED: 13 Aug 2002 (20020813/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s 11  
L2 31 L1

=> s 12 andpd<20001116  
MISSING OPERATOR L2 ANDPD<20001  
The search profile that was entered contains terms or nested terms that are not separated by a logical operator.

=> s 12 and pd<20001116  
20563348 PD<20001116  
(PD<20001116)  
L3 6 L2 AND PD<20001116

=> d 13 1-6

L3 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS  
AN 2000:351357 CAPLUS  
DN 133:9107  
TI Dry powder for inhalation  
IN Keller, Manfred; Mueller-Walz, Rudi  
PA Skyepharma A.-G., Switz.  
SO PCT Int. Appl., 44 pp.  
CODEN: PIXXD2  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000028979	A1	20000525	WO 1999-CH528	19991110 <--
	W: AU, CA, CN, CZ, HU, IN, JP, NO, NZ, PL, RO, RU, SK, US, ZA				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,				
	PT, SE				
	AU 9964578	A1	20000605	AU 1999-64578	19991110 <--
	EP 1131059	A1	20010912	EP 1999-952212	19991110
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT.,				
	IE, FI, RO				
	NO 2001002346	A	20010626	NO 2001-2346	20010511
PRAI	CH 1998-2286	A	19981113		
	WO 1999-CH528	W	19991110		

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2002 ACS  
AN 2000:254113 CAPLUS  
DN 132:284231  
TI Storable formulation of active substance  
IN Hochrainer, Dieter; Zierenberg, Bernd  
PA Boehringer Ingelheim Pharma K.-G., Germany  
SO Ger. Offen., 8 pp.  
CODEN: GWXXBX

DT Patent  
LA German

FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19847970	A1	20000420	DE 1998-19847970	19981017 <--
	WO 2000023037	A1	20000427	WO 1999-EP7589	19991009 <--
	W: AE, AU, BG, BR, CA, CN, CZ, EE, HR, HU, ID, IL, IN, JP, KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9963370	A1	20000508	AU 1999-63370	19991009 <--
	BR 9914608	A	20010703	BR 1999-14608	19991009
	EP 1119334	A1	20010801	EP 1999-950688	19991009
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	TW 466111	B	20011201	TW 1999-88117882	19991015
	NO 2001001830	A	20010618	NO 2001-1830	20010410
PRAI	DE 1998-19847968	A	19981017		
	DE 1998-19847970	A	19981017		
	US 1998-112380P	P	19981214		
	WO 1999-EP7589	W	19991009		

L3 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 2000:116874 CAPLUS  
DN 132:156861  
TI Medicinal aerosol formulations  
IN Keller, Manfred; Herzog, Kurt; Mueller-Walz, Rudi; Kraus, Holger  
PA Jago Research A.-G., Switz.  
SO PCT Int. Appl., 36 pp.  
CODEN: PIXXD2

DT Patent  
LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000007567	A1	20000217	WO 1999-CH360	19990802 <--
	W: AU, CA, CN, IN, JP, NO, NZ, US, ZA				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9948939	A1	20000228	AU 1999-48939	19990802 <--
	EP 1102579	A1	20010530	EP 1999-932599	19990802
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002522374	T2	20020723	JP 2000-563253	19990802
	NO 2001000531	A	20010131	NO 2001-531	20010131
PRAI	CH 1998-1633	A	19980804		
	WO 1999-CH360	W	19990802		

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS  
 AN 2000:98270 CAPLUS  
 DN 132:141967  
 TI Medicinal aerosol formulations  
 IN Keller, Manfred; Herzog, Kurt; Mueller-Walz, Rudi; Kraus, Holger  
 PA Jago Research A.-G., Switz.  
 SO PCT Int. Appl., 41 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006121	A1	20000210	WO 1999-CH337	19990722 <--
	W: AU, CA, CN, IN, JP, NO, NZ, US, ZA				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9945989	A1	20000221	AU 1999-45989	19990722 <--
	EP 1100465	A1	20010523	EP 1999-928996	19990722
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002521424	T2	20020716	JP 2000-561978	19990722
	NO 2001000391	A	20010323	NO 2001-391	20010123
PRAI	CH 1998-1565	A	19980724		
	WO 1999-CH337	W	19990722		
RE.CNT 4	THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD				
	ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L3 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS  
 AN 2000:96087 CAPLUS  
 DN 132:141964  
 TI Two-piece capsule for pharmaceutical preparations for dry powder inhalers  
 IN Hochrainer, Dieter; Eckert, Josef  
 PA Boehringer Ingelheim Pharma K.-G., Germany  
 SO Ger. Offen., 10 pp.  
 CODEN: GWXXBX

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19835346	A1	20000210	DE 1998-19835346	19980805 <--
	WO 2000007572	A2	20000217	WO 1999-EP5614	19990803 <--
	WO 2000007572	A3	20000511		
	W: AU, BG, BR, CA, CN, CZ, EE, HU, ID, IL, IN, JP, KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, TR, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9957304	A1	20000228	AU 1999-57304	19990803 <--
	BR 9912748	A	20010515	BR 1999-12748	19990803
	EP 1100474	A2	20010523	EP 1999-944325	19990803
	EP 1100474	B1	20020717		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002522378	T2	20020723	JP 2000-563258	19990803
	NO 2001000535	A	20010131	NO 2001-535	20010131
	US 2001008637	A1	20010719	US 2001-800647	20010307
PRAI	DE 1998-19835346	A	19980805		
	US 1998-113214P	P	19981222		
	US 1999-365912	A1	19990803		

WO 1999-EP5614 W 19990803

L3 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS  
AN 1997:141011 CAPLUS  
DN 126:148511  
TI Ethanol-containing pharmaceutical preparations for production of propellant-free aerosols  
IN Freund, Bernhard; Krueger, Michael; Zierenberg, Bernd  
PA Boehringer Ingelheim Kg, Germany  
SO Ger. Offen., 7 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19625027	A1	19970102	DE 1996-19625027	19960621 <--
	CA 2225601	AA	19970116	CA 1996-2225601	19960621 <--
	WO 9701329	A1	19970116	WO 1996-EP2700	19960621 <-- W: AU, BG, BR, BY, CA, CN, CZ, EE, FI, HU, IL, JP, KR, KZ, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, UZ, VN RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
	AU 9664144	A1	19970130	AU 1996-64144	19960621 <--
	AU 721566	B2	20000706		
	EP 835098	A1	19980415	EP 1996-923883	19960621 <-- R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI
	CN 1189096	A	19980729	CN 1996-195019	19960621 <--
	CN 1086575	B	20020626		
	BR 9609307	A	19990706	BR 1996-9307	19960621 <--
	JP 11508547	T2	19990727	JP 1996-504156	19960621 <--
	CZ 288337	B6	20010516	CZ 1997-4192	19960621
	IL 122752	A1	20010724	IL 1996-122752	19960621
	ZA 9605411	A	19961227	ZA 1996-5411	19960626 <--
	NO 9706084	A	19971223	NO 1997-6084	19971223 <--
PRAI	DE 1995-19523207	A1	19950627		
	WO 1996-EP2700	W	19960621		

=> s 11 and asthma  
31 L1  
18546 ASTHMA  
19 ASTHMAS  
18553 ASTHMA  
(ASTHMA OR ASTHMAS)

L4 2 L1 AND ASTHMA

=> d 14 1-2

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS  
AN 2002:368320 CAPLUS  
DN 136:374855  
TI Inhalant compositions containing tiotropium salts and salmeterol salts  
IN Schmelzer, Christel; Nagel, Juergen  
PA Boehringer Ingelheim Pharma K.-G., Germany  
SO PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DT Patent  
LA German  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 2002038154 A1 20020516 WO 2001-EP12962 20011109  
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,  
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,  
US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

DE 10056104 A1 20020523 DE 2000-10056104 20001113

PRAI DE 2000-10056104 A 20001113

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

AN 2001:65653 CAPLUS

DN 135:86394

TI Inhaled anticholinergic therapy: applied pharmacology and interesting developments

AU Witek, Theodore J., Jr.; Disse, Bernd

CS Head, Respiratory & Immunology Clinical Research, Boehringer Ingelheim Pharmaceutical Inc, Ridgefield, CT, 06877-0363, USA

SO Current Opinion in Investigational Drugs (PharmaPress Ltd.) (2001), 2(1), 53-58

CODEN: COIDAZ

PB PharmaPress Ltd.

DT Journal; General Review

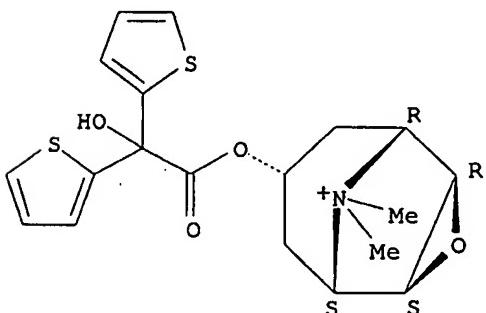
LA English

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

> DIS L1 1 IDE

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS  
RN 186691-13-4 REGISTRY  
CN 3-Oxa-9-azoniatricyclo[3.3.1.0<sub>2,4</sub>]nonane, 7-[(hydroxydi-2-thienylacetyl)oxy]-9,9-dimethyl-, (1.alpha.,2.beta.,4.beta.,5.alpha.,7.bet.a.)- (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Tiotropium  
FS STEREOSEARCH  
MF C19 H22 N O4 S2  
CI COM  
SR CA  
LC STN Files: ADISINSIGHT, BIOSIS, CA, CAPLUS, SYNTHLINE, TOXCENTER,  
USPATFULL

Relative stereochemistry.



31 REFERENCES IN FILE CA (1967 TO DATE)  
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
31 REFERENCES IN FILE CAPLUS (1967 TO DATE)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.34	2.76

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FILE COVERS 1907 - 14 Aug 2002 VOL 137 ISS 7  
FILE LAST UPDATED: 13 Aug 2002 (20020813/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> s 11  
L2           31 L1

=> s 12 and ?hydrate  
      227665 ?HYDRATE  
L3           3 L2 AND ?HYDRATE

=> d 13 1-3

L3   ANSWER 1 OF 3 CAPLUS COPYRIGHT 2002 ACS  
AN  2001:416744 CAPLUS  
DN  135:10051

TI  Pharmaceutical inhalants containing formoterol for the treatment of chronic obstructive pulmonary disease

IN  Haeberlin, Barbara

PA  Novartis A.-G., Switz.; Novartis-Erfindungen

SO  PCT Int. Appl., 9 pp.

CODEN: PIXXD2

DT  Patent

LA  English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001039745	A2	20010607	WO 2000-EP11894	20001128
	WO 2001039745	A3	20011220		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
	FR 2801506	A1	20010601	FR 2000-15277	20001127
	NO 2002001963	A	20020425	NO 2002-1963	20020425
PRAI	GB 1999-28311	A	19991130		
	WO 2000-EP11894	W	20001128		

L3   ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS

AN  2000:351357 CAPLUS

DN  133:9107

TI  Dry powder for inhalation

IN  Keller, Manfred; Mueller-Walz, Rudi

PA  Skyepharma A.-G., Switz.

SO  PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DT  Patent

LA  German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000028979	A1	20000525	WO 1999-CH528	19991110
	W:	AU, CA, CN, CZ, HU, IN, JP, NO, NZ, PL, RO, RU, SK, US, ZA			

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
 PT, SE  
 AU 9964578 A1 20000605 AU 1999-64578 19991110  
 EP 1131059 A1 20010912 EP 1999-952212 19991110  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, RO  
 NO 2001002346 A 20010626 NO 2001-2346 20010511  
 PRAI CH 1998-2286 A 19981113  
 WO 1999-CH528 W 19991110  
 RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 AN 1997:141011 CAPLUS  
 DN 126:148511  
 TI Ethanol-containing pharmaceutical preparations for production of  
 propellant-free aerosols  
 IN Freund, Bernhard; Krueger, Michael; Zierenberg, Bernd  
 PA Boehringer Ingelheim Kg, Germany  
 SO Ger. Offen., 7 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19625027	A1	19970102	DE 1996-19625027	19960621
	CA 2225601	AA	19970116	CA 1996-2225601	19960621
	WO 9701329	A1	19970116	WO 1996-EP2700	19960621
	W: AU, BG, BR, BY, CA, CN, CZ, EE, FI, HU, IL, JP, KR, KZ, LT, LV, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, UA, US, UZ, VN			RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE	
	AU 9664144	A1	19970130	AU 1996-64144	19960621
	AU 721566	B2	20000706		
	EP 835098	A1	19980415	EP 1996-923883	19960621
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI				
	CN 1189096	A	19980729	CN 1996-195019	19960621
	CN 1086575	B	20020626		
	BR 9609307	A	19990706	BR 1996-9307	19960621
	JP 11508547	T2	19990727	JP 1996-504156	19960621
	CZ 288337	B6	20010516	CZ 1997-4192	19960621
	IL 122752	A1	20010724	IL 1996-122752	19960621
	ZA 9605411	A	19961227	ZA 1996-5411	19960626
	NO 9706084	A	19971223	NO 1997-6084	19971223
PRAI	DE 1995-19523207	A1	19950627		
	WO 1996-EP2700	W	19960621		

L3 ANSWER 6 OF 12 REGISTRY COPYRIGHT 2002 ACS

RN 411207-31-3 REGISTRY

CN 3-Oxa-9-azoniatricyclo[3.3.1.0<sub>2,4</sub>]nonane, 7-[ (hydroxydi-2-thienylacetyl)oxy]-9,9-dimethyl-, bromide, monohydrate, (1.alpha.,2.beta.,4.beta.,5.alpha.,7.beta.)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN Tiotropium bromide monohydrate

FS STEREOSEARCH

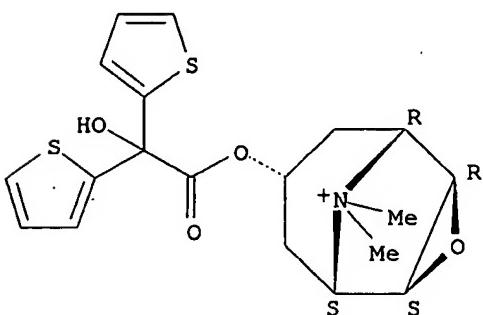
MF C19 H22 N O4 S2 . Br . H2 O

SR CA

LC STN Files: CA, CAPLUS

CRN (186691-13-4)

Relative stereochemistry.



● Br<sup>-</sup>

● H<sub>2</sub>O

6 REFERENCES IN FILE CA (1967 TO DATE)

6 REFERENCES IN FILE CAPLUS (1967 TO DATE)

=> s 16 and asthma  
18546 ASTHMA  
19 ASTHMAS  
18553 ASTHMA  
(ASTHMA OR ASTHMAS)  
L7 2 L6 AND ASTHMA

=> d 17 1-2 ibib abs hitstr

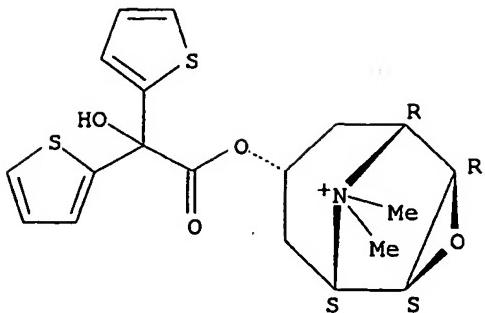
L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 2002:368320 CAPLUS  
DOCUMENT NUMBER: 136:374855  
TITLE: Inhalant compositions containing tiotropium salts and salmeterol salts  
INVENTOR(S): Schmelzer, Christel; Nagel, Juergen  
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma K.-G., Germany  
SOURCE: PCT Int. Appl., 36 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002038154	A1	20020516	WO 2001-EP12962	20011109
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10056104	A1	20020523	DE 2000-10056104	20001113

PRIORITY APPLN. INFO.: DE 2000-10056104 A 20001113  
AB The invention relates to novel drug compns. based on tiotropium salts and on salmeterol salts, a method for their prodn. and their use for treating respiratory conditions. Thus an inhalation powder contained per capsule (.mu.g): tiotropium bromide 10.8; salmeterol x 1/2 H<sub>2</sub>SO<sub>4</sub> 27.9; Lactose 4961.3.

IT 186691-13-4D, Tiotropium, salts  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(inhalant compns. contg. tiotropium salts and salmeterol salts)  
RN 186691-13-4 CAPLUS  
CN 3-Oxa-9-azoniätricyclo[3.3.1.0<sup>2,4</sup>]nonane, 7-[(hydroxydi-2-thienylacetyl)oxy]-9,9-dimethyl-, (1.alpha.,2.beta.,4.beta.,5.alpha.,7.bet.a.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2001:65653 CAPLUS

DOCUMENT NUMBER: 135:86394

TITLE: Inhaled anticholinergic therapy: applied pharmacology and interesting developments

AUTHOR(S): Witek, Theodore J., Jr.; Disse, Bernd

CORPORATE SOURCE: Head, Respiratory & Immunology Clinical Research, Boehringer Ingelheim Pharmaceutical Inc, Ridgefield, CT, 06877-0363, USA

SOURCE: Current Opinion in Investigational Drugs (PharmaPress Ltd.) (2001), 2(1), 53-58

CODEN: COIDAZ

PUBLISHER: PharmaPress Ltd.

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with 29 refs. Topics discussed include the history of therapeutics with anticholinergics; key structural considerations in inhaled anticholinergics; basic pharmacol.; receptors and post-receptor events; pharmacodynamic effects; the establishment of the use of ipratropium; and the development of tiotropium.

IT 186691-13-4

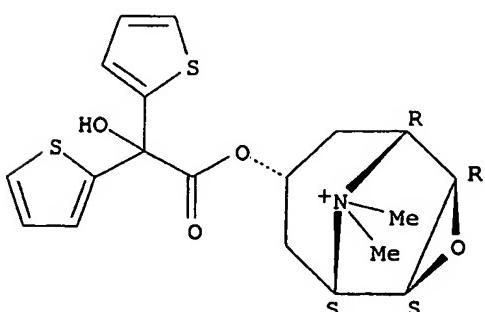
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

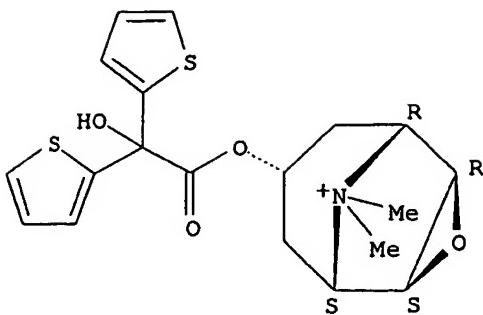
(inhaled anticholinergic therapy)

RN 186691-13-4 CAPLUS

CN 3-Oxa-9-azoniatricyclo[3.3.1.02,4]nonane, 7-[(hydroxydi-2-thienylacetyl)oxy]-9,9-dimethyl-, (1.alpha.,2.beta.,4.beta.,5.alpha.,7.bet.a.)- (9CI) (CA INDEX NAME)

Relative stereochemistry.





REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s 411207-31-3/rn  
 6 411207-31-3  
 0 411207-31-3D  
 L8 6 411207-31-3/RN  
 (411207-31-3 (NOTL) 411207-31-3D )

=> d 18 1-8

L8 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2002 ACS  
 AN 2002:484684 CAPLUS  
 DN 137:47348  
 TI Procedure for the production of the anticholinergic tiotropium bromide from tropenol  
 IN Banholzer, Rolf; Graulich, Manfred; Luettke, Sven; Mathes, Andreas;  
 Meissner, Helmut; Specht, Peter; Broeder, Wolfgang  
 PA Boehringer Ingelheim Pharma K.-G., Germany  
 SO Ger. Offen., 12 pp.  
 CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 10064816	A1	20020627	DE 2000-10064816	20001222
WO 2002051840	A1	20020704	WO 2001-EP14566	20011212
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	DE 2000-10064816 A	20001222		
OS	CASREACT 137:47348; MARPAT 137:47348			

L8 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2002 ACS  
 AN 2002:353454 CAPLUS  
 DN 136:359645  
 TI Inhalation solution containing tiotropium salts and other drugs  
 IN Drechsel, Karin; Niklaus-Humke, Barbara; Schmelzer, Christel; Barth, Petra  
 PA Boehringer Ingelheim Pharma Kg, Germany

SO PCT Int. Appl., 31 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2002036591	A2	20020510	WO 2001-EP12296	20011024	
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI DE 2000-10054042 A 20001031

L8 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 2002:353266 CAPLUS

DN 136:374831

TI Inhalation solution containing tiotropium salt

IN Niklaus-Humke, Barbara; Schmelzer, Christel; Barth, Petra; Drechsel, Karin

PA Boehringer Ingelheim Pharma K.-G., Germany

SO PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2002036104	A2	20020510	WO 2001-EP12292	20011024	
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

DE 10152521 Al 20020711

DE 2001-10152521 20011024

PRAI DE 2000-10054036 A 20001031

L8 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 2002:349110 CAPLUS

DN 136:359631

TI Inhalation solution containing tiotropium salts and other drugs

IN Drechsel, Karin; Niklaus-Humke, Barbara; Schmelzer, Christel; Barth, Petra

PA Boehringer Ingelheim Pharma K.-G., Germany

SO Ger. Offen., 14 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10152369	A1	20020508	DE 2001-10152369	20011024
PRAI	DE 2000-10054042	IA	20001031		

L8 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2002 ACS

AN 2002:293650 CAPLUS  
 DN 136:314978  
 TI Crystalline tiotropium bromide monohydrate, method for producing the usage as inhalant powder  
 IN Banholzer, Rolf; Sieger, Peter; Kulinna, Christian; Trunk, Michael; Graulich, Manfred Ludwig August; Specht, Peter; Meissner, Helmut; Mathes, Andreas  
 PA Boehringer Ingelheim Pharma K.-G., Germany  
 SO PCT Int. Appl., 22 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002030928	A1	20020418	WO 2001-EP11225	20010928
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRAI DE 2000-10050621 A 20001012

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2002 ACS  
 AN 2002:293412 CAPLUS  
 DN 136:315000  
 TI Tiotropium-containing inhalation powder for the treatment of chronic obstructive pulmonary disease  
 IN Bechtold-Peters, Karoline; Walz, Michael; Boeck, Georg; Doerr, Rolf  
 PA Boehringer Ingelheim Pharma K.-G., Germany  
 SO PCT Int. Appl., 25 pp.  
 CODEN: PIXXD2

DT Patent  
 LA German  
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002030389	A1	20020418	WO 2001-EP11227	20010928
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

US 2002106332 A1 20020808 US 2001-977911 20011011

PRAI DE 2000-10050635 A 20001012  
 US 2000-252683P P 20001122  
 DE 2001-10138022 A 20010810

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file registry